

## REMARKS

Claims 12-39 are pending in the instant patent application. In an Office Action dated 09 April 2004, the Examiner indicates that claims 38 and 39 are allowable and claims 21, 25, 26, and 28 would be allowable if amended to include all of the limitations of the base and any intervening claims. The Examiner rejects the remaining claims, 12-20, 22-24, 27, and 29-37 on prior art grounds.

In response to the outstanding Action, Applicant submits the present Reply, with Amendment and Remarks, which overcomes the outstanding rejections and objections and places the application in condition for allowance; entry and consideration hereof are respectfully requested.

The various objections and rejections of the Examiner's Action are now specifically addressed in turn.

In the Office Action, claims 21, 25, 26, and 28 are objected to as depending from rejected base claims but are otherwise indicated as being allowable. Herein, claims 21, 25, 26, and 28 are amended to include all of the limitations of the respective base claims and any intervening claims. Accordingly, these claims are now allowable; withdrawal of the outstanding objections and allowance of these claims is respectfully requested.

Claims 37 and 38 are indicated in the Action as being allowable. Applicant gratefully accepts allowance of these claims.

Claims 12-15, 17-20, 22-24, 27, 29-37 are rejected under 35 U.S.C. §103(a) as allegedly being obvious in view of U.S. Patent No. 5,655,453 to Ackley (hereinafter, "Ackley") as combined with U.S. Design Patent No. 349,571 to Merritt (hereinafter, "Merritt"). Here, the Examiner contends that Ackley teaches a process of applying a pattern to an object with a curved surface including providing the object, orienting the object relative the printing device and printing a pattern on the object, but does not disclose

that the object is an earplug. Office Action, page 3, item 5. For this requirement of the claimed invention, the Examiner relies upon Merritt which allegedly teaches that an ear protector having an indicia provided thereon is well known in the art. *Id.*

It is noted that for an obviousness rejection to be proper, the Examiner must meet the burden of establishing that all elements of the invention are disclosed in the prior art; that the prior art relied upon, coupled with knowledge generally available in the art at the time of the invention, must contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or combined references; and that the proposed modification of the prior art must have had a reasonable expectation of success, determined from the vantage point of the skilled artisan at the time the invention was made. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); *In Re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970); *Amgen v. Chugai Pharmaceuticals Co.*, 927 U.S.P.Q.2d, 1016, 1023 (Fed. Cir. 1996).

In response to the obviousness rejection of claims 12-15, 17-20, 22-24, 27, 29-37, Applicant submits that all of these requirements for prima facie obviousness are not met and further that the claimed invention has experienced commercial success which, as a secondary consideration, indicates the non-obviousness of the claims. Thus, for at least these reasons, the referenced obviousness rejections are improper and must be withdrawn.

Turning first to independent claim 12, a process is recited for forming a pattern on an earplug comprising, *inter alia*, providing an earplug, orienting the earplug relative to a printing device, and printing the pattern on the earplug using the printing device.

Ackley teaches a method and apparatus for marking pellet shaped articles. The reference specifically addresses applying marking to irregularly shaped fragile pellet shaped articles of the food and pharmaceutical industries such as candies, capsules, pills, tablets, etc. Col. 2, line 62 through Col. 3, line 26 and Col. 4, lines 48-59. Ackley combines an ink-jet system with a pellet-conveying system especially configured to properly locate and maintain the pellet-shaped articles in proper position as they traverse

the ink-jet system. Col. 3, lines 35-42. Particularly, the reference teaches a pellet marking apparatus 1 including a conveyor 4 for transferring the pellets to a printing head 6 which applies a marking to the pellets. Col. 4, lines 48-67. The conveyor 4 consists of bars 12 each having pockets 25 for receiving, entraining the pellets, and carrying them to the printing head 6. *Id.*

Merritt discloses and claims an ornamental design for a “combination ear protector and cheering aid” as shown in a single Figure. The drawing illustrates an elongated object having a “4” shown at one end thereof. The reference does not teach or provide any further description concerning the elongated object nor does Merritt describe the nature of the number “4” nor how it is formed on or applied to the elongated object.

As mentioned above, the Examiner essentially contends that Ackley teaches a process for printing indicia on objects with curved surfaces, such as a pellet, and Merritt teaches that ear protectors with indicia are known in the art, and thus it would have been obvious to apply the process of Ackley to the print the indicia on the ear protector of Merritt to function as an advertisement or cheering aid. Office Action, page 3, item 5.

However, Applicant respectfully submits that there is no suggestion or motivation in the references nor in the knowledge contained in the art to combine and modify the references as proposed by the Examiner. Thus, the holding of *prima facie* obviousness is unfounded.

Ackley is directed to printing on pellet shaped articles such as capsules, caplets, pills, and tablets for food and pharmaceutical uses. Col. 4, lines 48-60. The reference, in no way, suggests application of its printing process to earplugs nor to hearing protectors of any kind nor even to objects having similar shape, composition, and/or properties as earplugs. Instead, Ackley is specifically directed to printing on pellet shaped items such as candies, pills, tablets, etc. *Id.* See also, col. 1, lines 19-30 and col. 2, lines 29-50. One of ordinary skill in the art would recognize these items as being formed of a solid dense mass

and being of a generally hard, non-compressible nature. This assertion is clearly supported by the ordinary meaning of the term “pellet”:

“A small, solid or densely packed ball or mass, as of food, wax, or medicine. A bullet or piece of small shot. A stone ball, used as a catapult missile or a primitive cannonball.” THE AMERICAN HERITAGE DICTIONARY OF THE ENGLISH LANGUAGE, 4<sup>th</sup> Ed. (2000).

Clearly, one of skill in the art would appreciate that an earplug, as claimed by Applicant, does not fall within this ordinary meaning of ‘pellet’. One of skill in the art would recognize that, since an earplug is worn in the ear canal, it necessarily must not be a pellet, i.e., since the earplug is exposed to sensitive internal membranes it may not be a ‘small, solid or densely packed ball or mass, as of food, wax, or medicine, a bullet, a piece of small shot, or a stone ball.’ To the contrary, one of ordinary skill in the art would recognize that an earplug is generally a softer, compressible, resilient element particularly sized to occlude the ear canal and is, for example, formed of a rubber or foam material. Further, due to the extensive differences in the mechanical properties of pellets and earplugs, one of ordinary skill in the art would undoubtedly recognize that printing requirements and conditions would vary significantly between the two distinct types of objects.

Thus, there is no Disclosure in Ackley, express, inherent, or otherwise, which would suggest to or motivate one of skill in the art to apply the pellet-printing process thereof to an object such as an earplug having entirely different mechanical properties and entirely different printing considerations than that of a pellet.

Merritt, as discussed above, is merely a design patent which discloses a single view of a ‘combination ear protector and cheering aid’. The meaning of “cheering aid”, as described and claimed by Merritt, is not understood by Applicant nor arguably by one of ordinary skill in the art. The term is not explained in the patent nor is it found in a common dictionary, such as THE AMERICAN HERITAGE DICTIONARY OF THE ENGLISH LANGUAGE, 4<sup>th</sup> Ed. (2000). The term “ear protector” is clearly vague and non-descriptive

and may simply be interpreted as any device which serves to, in some way, shield the ear from exposure to some element or material, etc. This term does not clarify the nature of the claimed design. No other description concerning the design is provided. Instead, only a single drawing is provided. The drawing shows an elongated cylindrical object having a "4" at one end. The exact nature, details, and characteristics of the object and the number "4" disposed thereon, are unclear. Specifically, Merritt does not teach what the number "4" is nor how it is applied to the elongated cylindrical object. That is, from the disclosure of the reference, it is unclear whether the number "4" is printed, stamped, etched, adhered, or otherwise applied to the elongated object. Further, while an elongated cylinder-like object is disclosed by Merritt, the size and exact proportions of the object are unknown and, further, the material composing the object and the characteristics thereof are also unknown. In fact, it is unclear as to whether the object disclosed by Merritt is indeed an earplug, as contended by the Examiner. The design object may not be an earplug at all, and instead could be any item relating to ear protection such as, for example, an ear muff or a portion thereof, a filter or the like for a head phone assembly, an item to protect a user against blows to the ear, an elongate cylindrical pillow to protect the user's ears while sleeping, etc. Thus, the exact nature, disposition, and character of the object disclosed in Merritt is uncertain.

Clearly, for at least these reasons, Merritt provides no disclosure which would suggest to or motivate one of ordinary skill in the art to apply the pellet-printing process of Ackley to an earplug, such as that presently claimed by Applicant. Thus, the Examiner's assertion of *prima facie* obviousness is unsubstantiated in this regard.

Further, the Examiner has not located a single reference which even approaches a process for printing a pattern on an earplug, as claimed by Applicant. Thus, clearly, at the time Applicant filed the present application, the knowledge available in the art would not have suggested or motivated one of ordinary skill in the art to combine and modify the Ackley and Merritt references as proposed by the Examiner.

Accordingly there is no suggestion or motivation, in the references nor in the art, to combine and modify Ackley and Merritt to form the invention of Applicant's claim 12, therefore prima facie obviousness is not established and the outstanding rejection of claim 12 is improper; reconsideration and withdrawal thereof is respectfully requested.

Additionally, Applicant submits that even if Ackley and Merritt were combined and modified as suggested by the Examiner, one of ordinary skill in the art would not have had a reasonable likelihood of success in forming the invention of claim 12. This is because Ackley is not suited nor configured for printing on an elongated cylindrical object as disclosed by Merritt. As mentioned, Ackley is directed to printing on pellet shaped articles such as capsules, caplets, pills, and tablets for food and pharmaceutical uses. Col. 4, lines 48-60. A conveyor 4 receives pellets from a hopper 5 and transfers the pellets to a printing head 6 which applies a marking to the pellets. Col. 4, line 48 through col. 5, line 55. The conveyor 4 consists of bars 12 each having pockets 25 for receiving the pellets, entraining the pellets, and carrying them to the printing head 6. *Id.* The bars 12 are passed beneath the hopper 5 at a predetermined angle and rate as a plurality of pellets are dispensed from the hopper 5 atop the bars 12. Col. 5, line 57 through col. 6, line 26. The weight of the pellets heaped atop each bar 12 settle specific pellets into the pockets 25. Col. 7, lines 3-30. The remaining pellets that do not find their way into the pockets 25 are removed from the bars 12 by a brush 27. Col. 7, lines 44-64. The pockets 25 are specifically configured for receiving small pellet objects. Col. 8, line 56 through col. 9, line 35.

The printing device and method of Ackley cannot be applied to the object of Merritt. That is, presuming that Merritt teaches some type of earplug, inserting a plurality of such earplugs into the hopper 5 of Ackley and running the earplugs through the device of Ackley would not result in printing of the earplugs. Particularly, the weight, shape, and overall character of an earplug is entirely different than that of the pellets of Ackley. Earplugs dropped on the bars 12 of Ackley would clearly not settle into the pockets 25 as dense, heavier pellet-shaped objects do. Even if earplugs were capable of some sort of

settling process, the earplugs certainly would not fit into the pellet-shaped pockets of Ackley. Thus, if the object of Merritt was run through the device of Ackley, the object would most likely be jammed in the device or would be brushed off the conveyor 4 by the brush 27. Accordingly, one of ordinary skill in the art at the time of Applicant's invention would not have had a reasonable expectation of success in forming the invention of claims 12 by the combination of Ackley and Merritt. Furthermore, combining the references as such would render Ackley unsuitable for performing its intended function. For at least these reasons, prima facie obviousness of claim 12 is not established with respect to the Ackley and Merritt references.

Moreover, it is noted that Ackley does not at all expressly disclose an earplug, as recited in claim 12. Thus, Ackley necessarily does not disclose providing an earplug, orienting the earplug, nor printing a pattern on the earplug, all as recited in Applicant's claim 12. Additionally, these claim limitations are not found *inherently* in Ackley because the non-disclosed elements do not necessarily flow from the prior art, i.e., the claimed elements do not naturally occur under the conditions set forth in the Ackley reference *Consolidated Aluminum Corp. v. Foseco International Ltd.*, 10 U.S.P.Q.2d 1143, 1165 (N.D. Ill. 1988). Further, as discussed above, these elements are not found in the design patent of Merritt. Also, it is known that drawings alone can anticipate or make obvious a claimed invention but the drawing must show all the claimed structural features and how they are put together. *In re Mraz*, 455 F.2d 1069, 173 USPQ 25 (CCPA 1972); *Jockmus v. Leviton*, 28 F.2d 912 (2d Cir. 1928), emphasis added. Clearly, Merritt does not show *all the claimed structural features and how they are put together* as required by law.

Additionally, it is well settled that "anticipation of inventions set forth in product claims cannot be predicated on mere conjecture respecting the characteristics of products that might result from the practice of processes disclosed in references." *Phillips Petroleum Co. v. U.S. Steel Corp.*, 673 F. Supp. 1278, 6 U.S.P.Q.2d 1065, 1076-77 n.12 (D. Del. 1987), *aff'd*, 865 F.2d 1247, 9 U.S.P.Q.2d 1461 (Fed. Cir. 1989); *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 U.S.P.Q. 303 (Fed. Cir. 1983), *appeal*

*after remand*, 842 F.2d 1275, 6 U.S.P.Q.2d 1277 (Fed. Cir. 1988). Here, the Examiner is improperly predicating the outstanding obviousness rejections on what may result from the practice of Ackley. Accordingly, the rejections are improper and must be withdrawn.

Since the references, taken singularly or in combination, (1) fail to teach or suggest all of the limitations of claim 12, (2) do not include a suggestion or motivation to combine nor modify the references to form the claimed invention, nor (3) do not provide a reasonable likelihood of success of forming the invention, the claim is not *prima facie* obvious over Ackley and Merritt. See, *In re Fine*, *In Re Wilson*, *Amgen v. Chugai Pharmaceuticals Co*, etc. Accordingly, the obviousness rejection of claim 12 is improper and may not be maintained; reconsideration and withdrawal of the relevant rejection is respectfully requested. Claim 12 is not further rejected or objected to and is thus allowable to Applicant.

Claims 13-15, 17-20, and 22-24 are similarly rejected as being obvious over Ackley and Merritt. These claims, however, variously depend from allowable claim 1 and are thus correspondingly allowable; reconsideration and withdrawal of the relevant rejections is respectfully requested. These claims are not further rejected or objected to and are thus allowable to Applicant.

In addition, concerning claim 15, the Examiner states Ackley discloses the claimed "impact printing device" at col. 9, lines 57-66 and col. 12, lines 29-48. However, at this citation Ackley discloses a printing head 81 corresponding in structure to those disclosed earlier in the background section of the patent. In the background section, Ackley describes a prior art contact-printing system consisting of a pair of rollers including a design roll which is disposed within an appropriate supply of ink, and a printing roll in contact with the design roll which transfers ink-laden indicia from the design roll to the object to be printed. Col. 1, lines 31-43. Thus, Ackley teaches *printing rollers* not "an impact printing device" as claimed by Applicant. Accordingly, for this additional reason, claim 15 is non-obvious and allowable over Ackley and the remaining cited art.



Further concerning claims 22-23, Applicant respectfully notes that the recited “alignment device” is simply not taught or suggest by Ackley or Merritt. Specifically, Ackley does not teach selectively positioning an earplug (or a pellet) in a plurality of orientations during a printing process, as recited by claim 23. Accordingly, for at least this reason, claims 22 and 23 are allowable over Ackley and Merritt.

Claims 27 and 29-37 are also rejected as being obvious with respect to Ackley and Merritt. Independent claim 27 includes all of the limitations of allowable claim 1 and additional limitations. Thus, claim 27 is clearly allowable over Ackley and Merritt for at least the reasons set forth above concerning claim 1. Further, claim 27 recites “orienting the earplug, with an orientation mechanism, relative to the printing device”. This limitation is not taught or suggested by Ackley. Instead Ackley simply conveys or transfers the pellets past the print head in a single orientation. Accordingly, for at least these reasons, prima facie obviousness does not exist and the outstanding rejection of claim 27 must be withdrawn.

Claims 29-37 variously depend from claim 27 and are thus correspondingly allowable over Ackley and Merritt; reconsideration and withdrawal of all relevant rejections is respectfully requested.

Finally, claim 16 is rejected under 35 U.S.C. §103(a) as being rendered obvious by Ackley, Merritt, and U.S. Patent No. 5,142,976 to Roulleau. However, claim 16 depends from allowable claim 1 and is thus correspondingly allowable; reconsideration and withdrawal of the outstanding obviousness rejection is respectfully requested.

In addition to all of the above-submitted arguments for non-obviousness, Applicant further submits that pending claims 12-39 are not obvious in view of the prior art due to secondary considerations, namely commercial success. By separate letter, Applicant provides a Supplemental Declaration under 37 C.F.R. §1.132 which establishes objective evidence of commercial success of the claimed invention. That is, the Declaration clearly establishes a nexus between the claimed invention and evidence of commercial success.

Additionally, the evidence of commercial success presented in the Declaration is commensurate in scope with, and derives from, the claimed invention.

This Declaration is submitted subsequent to an initial §1.132 Declaration filed on 17 December 2003 which was objected to by the Examiner as failing to establish the required nexus. Pursuant to a telephone interview with the Examiner on 13 July 2004 (see Examiner's Interview Summary, PTOL-413, in the prosecution file), the Supplemental Declaration directly links the product described in the Declaration to the claimed invention and further clearly establishes a nexus between the claimed invention and the commercial success of the product. Entry and consideration of the Supplemental Declaration is respectfully requested.

New claims 40-46 are herein added as variously depending from allowable claims 25-27. These claims further clarify Applicant's invention and do not contain any new matter as ample support is found throughout the originally filed specification, claims, and drawings. New claims 40-46 are allowable as depending upon allowable independent claims 25-27. Thus, entry, consideration, and allowance thereof are respectfully requested.

In conclusion, the Examiner's obviousness rejections of the claims are herein overcome because the relied upon references fail to establish a case of *prima facie* obviousness against the rejected claims and/or because commercial success of the claimed invention is established herein by presentation of objective evidence. Reconsideration and withdrawal of all outstanding rejections and allowance of the application are respectfully requested.

The Examiner is invited to contact Applicants' attorneys at the below-listed telephone number regarding this Supplemental Response or otherwise concerning the present application.

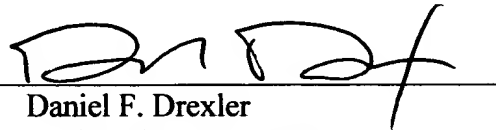
Applicants herein petition for any necessary extension of time required for entry and consideration of the present Supplemental Response.

The Commissioner is herein authorized to charge any required or outstanding fees regarding this Supplemental Response or otherwise concerning the present application to Deposit Account No. 06-1130 maintained by Applicants' attorneys.

Respectfully submitted,

CANTOR COLBURN LLP

By:



Daniel F. Drexler  
Registration No. 47,535  
CANTOR COLBURN LLP  
55 Griffin Road South  
Bloomfield, CT 06002  
Telephone: 860-286-2929  
Facsimile: 860-286-0115  
Customer No. 23413

Date: 12 OCT. 2004



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